



# JITF Web Testing

Test Planning Oversight Committee

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# Overview

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- Types of web-based applications
- Testing issues for web-based applications
- Web testing requirements documentation
- Types of problems found
- What else should be done?
- Summary



# Types of -based Applications

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- Thick client
  - Software must be loaded on client platforms
  - Application provides web interfaces and does not require browser
    - e.g., Java applications
- Thin client
  - Software loaded on workstation is limited to plugins
  - Access to application is via web browser



# Integration Testing f Applications

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- For all IMAs, integration testing evaluates level of effort to install, configure and use application
  - I.e., level of risk to integrate IMA into operating site
    - Including administration and security issues



# Testing Issues for Web-based Applications

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- JITF determines requirements that are applicable during documentation review and installation
  - Applicable integration requirements vary based on type of application
    - Thick vs. thin client
    - Single (central) server vs. fielded servers accessible through web interface



# Testing Issues for browser-based Applications

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- Examples
  - Color mapping requirements do not apply to browser-based clients
  - Most installation requirements apply to thick clients but typically not to thin clients
  - Some Operation requirements do not apply to thin clients
    - E.g., effect of shutdown of client workstation, exhaustion of client disk space



# Testing Issues for based Applications

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- Length of test
  - Thick client - no difference in practice from client/server IMA
  - Thin client
    - IMA with fielded servers - no difference in test duration
    - IMA with central server - test duration is shorter since numerous installation, environment, operation, and GUI requirements are not evaluated



# Web Integration Requirements Documentation

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- Definition of community baseline for browsers and other web products found in v3.0 of DoDIIS Profile
- Integration testing requirements for web-based applications
  - *Joint Integration Test Facility (JITF) DoDIIS Integration Requirements and Evaluation Procedures Version 3.0 for Enterprise (Web-based) Applications*
  - Also contained in master integration requirements document





# Types of

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- Installation
  - Inaccuracies/omissions in server installations
- Security
  - Open access to server files and directories
  - Web page vulnerabilities
  - Lack of documentation on audit architecture
- Administration
  - Management of user accounts



# Types of

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- User Interface
  - Background interfering with readability
- Functional
  - Errors upon selecting buttons
    - Error message may be from DBMS and not readily understood by user



# What Else Should Be Done?

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- Compatibility with Internet Explorer and Netscape
- Conformance with HTML, XML, etc.
- Security
  - Penetration testing
  - Auditing policy
- Functional
  - Link validation
  - Interface design



# Summary

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- Web-based applications are varied
  - Thick to thin clients
  - Selection of applicable integration requirements depends upon application design
- Web requirements are documented
- Web-based  $\neq$  problem free!
- What additional testing is required?